



Ocean resources are held in the public trust for the people of Florida, Louisiana, Texas, Mississippi, Alabama and the United States. Raising awareness about ocean protection and restoration through increased environmental education can build understanding and foster stewardship for natural resources. Collaboration between the Gulf states offers an opportunity to fully engage communities and encourage a stronger connection between land use, personal pollution and a community's natural heritage.

### ***Environmental Education Strengths: Existing Programs and Networks***

Environmental education throughout the Gulf is focused on raising environmental awareness, developing critical skills to address challenges facing the coasts, and fostering proactive attitudes to implement responsible environmental actions. Gulf states have many existing systems to address these goals:

- All Gulf states have formal units dedicated to environmental education.
- All Gulf states have coastal institutions of higher learning.
- Strong environmental volunteerism.
- Existing environmental education partnerships.
- Web-based programs, such as *Estuaries Live!*, offer a new conduit for education.
- Southern Association of Marine Educators and Southern Association of Marine Laboratories.
- Each state has a Sea Grant program, a U.S. Environmental Protection Agency Coastal Non-point Source Program and a Coastal Zone Management program with education components.
- Academic marine laboratories, which offer opportunities for marine science education.
- Federal education programs within the National Science Foundation, National Institute of Health, Department of Interior, Environmental Protection Agency, U.S. Navy, National Oceanic and Atmospheric Administration, National Estuarine Research Reserves and National Estuary Programs.
- Protected areas such as Gulf Islands National Seashore, State Parks, State Preserves, and National Parks and Wildlife Refuges offer education programs.

### ***Challenges and Barriers to Environmental Education***

Despite the strengths of the Gulf states and federal agencies, barriers in providing effective environmental education exist:

- Prioritizing issues for environmental education programs.
- Duplication of efforts with overlap of agency missions.
- Incorporating existing environmental education curricula into the lesson plans of formal classroom educators.

- Lack of Gulf education efforts in upriver states responsible for impacts to the Gulf.
- An under-representation of minority communities in environmental education programs.
- Reduction or elimination of field trips, a critical component of environmental education, by school districts.
- Availability of funding for environmental education.

### ***Solutions and Opportunities for Improving Environmental Education***

Barriers can be overcome with directed support and collaboration between state, federal and local agencies:

- Expand existing effective programs.
- Strengthen or establish collaborative partnerships with the private sector.
- Encourage integrated environmental education inside and outside of the classroom.
- Infuse more environmental education into fundamental curricula.
- Encourage environmental awareness as an integral part of community development.

### ***Needs from a State/Federal Partnership***

- Build on the success of existing and effective programs within the National Estuarine Research Reserves, National Estuary Programs and Sea Grant.
- Develop or strengthen existing coastal public outreach efforts or task forces.
- Support a regional network of environmental educators.
- Expand teacher workshops, preparation materials and training programs.
- Implement economic valuation or other socioeconomic studies and integrate the information into environmental education programs.

